

Fig. 1a

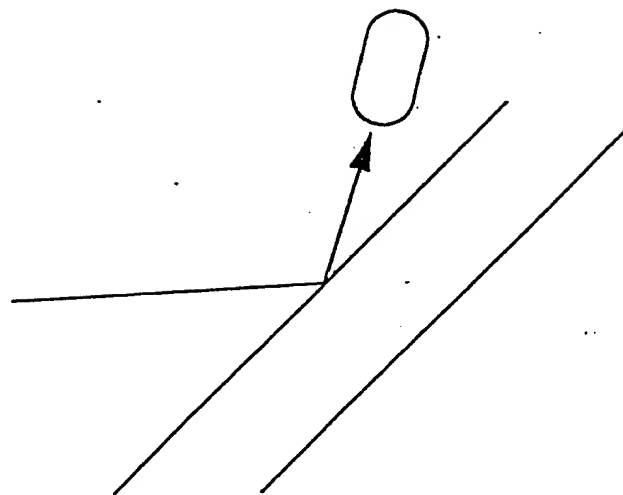


Fig. 1b

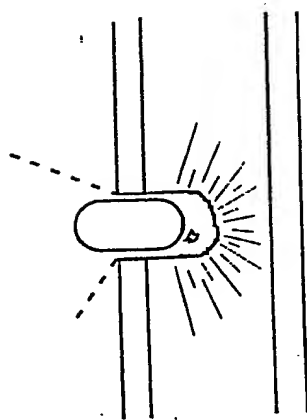


Fig. 1c

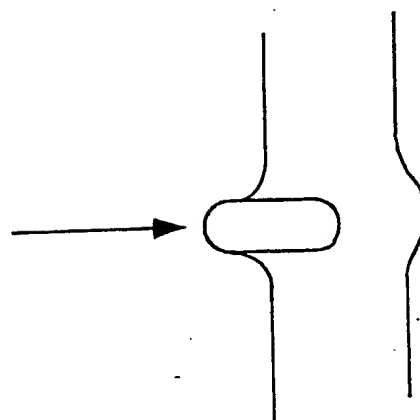


Fig. 1d

Test No.	Target			Areal Density (g/cm ²)	FS ^b : Before Impact			FS: After Penetration			Specific Energy Absorbed ^c (J/g/cm ²)
	Material(s)	Mesh (Yarns/in.)	Thickness per Ply (in.)		Mass (g)	Velocity (m/s)	K.E. (J)	Velocity (m/s)	K.E. (J)	K.E. Lost (J)	
20	Zylon	30X30	≈0.006	1	25	79	78	61.5	47.5	30.5	2346
26	Zylon	30X30	≈0.006	1	25	82.5	85	63	49.5	34.5	2654
23	Zylon	30X30	≈0.006	1	25	80	80	35.5 ^f	20 ^f	60	1366
	UHMW Polyethylene Felt		≈0.13	1							
22	Zylon	30X30	≈0.006	1	25	82	84	Did not Penetrate ^g		84	≥1123
	UHMW Polyethylene Felt		≈0.13	2							

^b FS means fragment simulator.

^c Specific energy absorbed (SEA) is defined as energy absorbed per unit areal density.

^f The impactor did not penetrate the felt; however, the impactor, completely penetrated the fabric.

^g Only partial penetration was obtained in this test—the impactor, surrounded by the felt, remained lodged in the hole in the fabric.

Fig. 2

[illegible]

^a W = warp yams; F = fill yams.

^b FS = fragment simulator; FB = fan blade

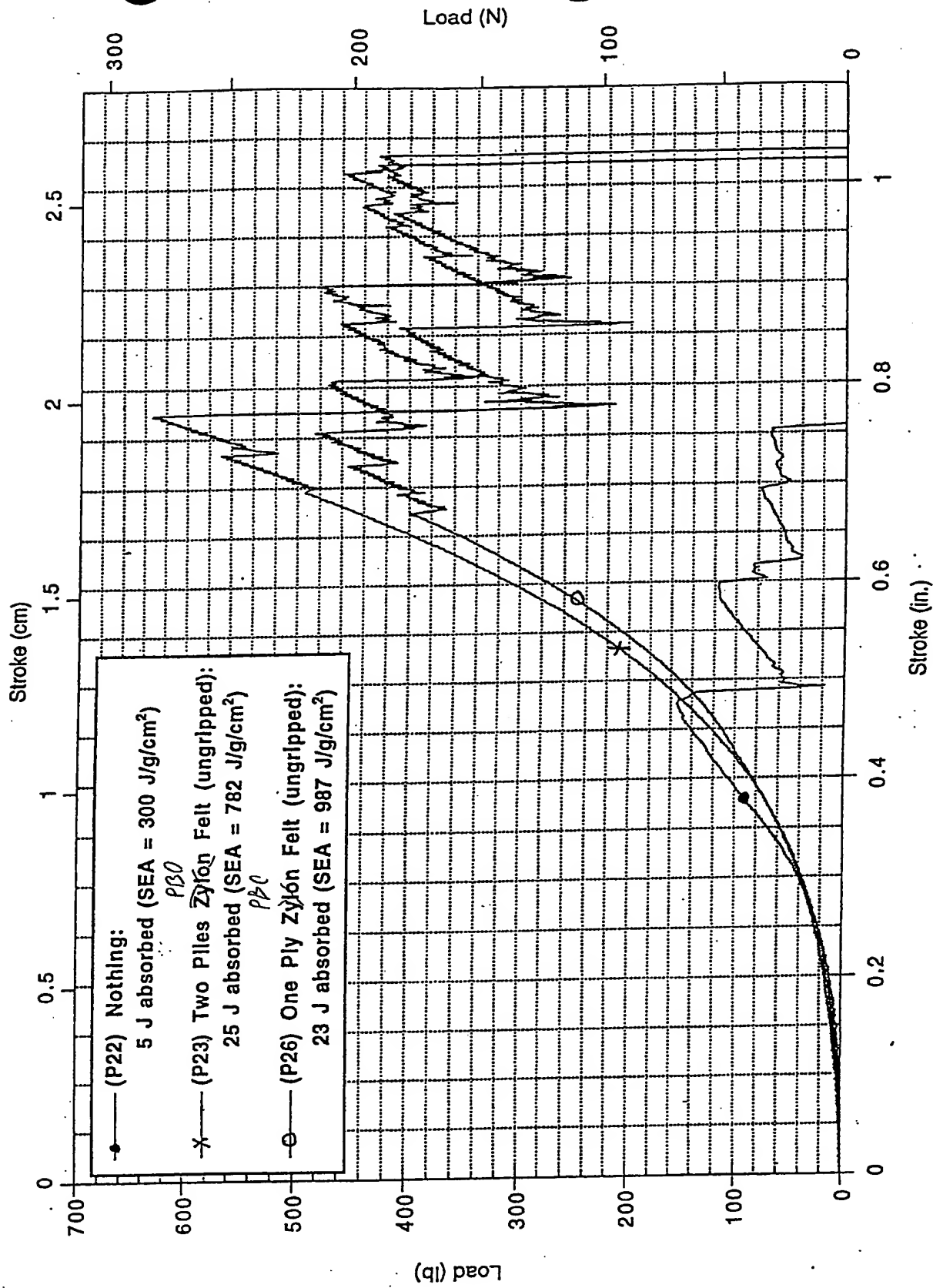
FS = fragment simulator, 10 = 10 mm blade

The angle between the direction of the warp yarns and the longest dimension of the penetration's impact area (e.g. the stress direction).

Tests involve constant stroke rate to complete penetration, except where marked "i", where data is at maximum before interruption. Data is for complete penetration, except for interrupted tests (marked "i"), where data is at maximum before interruption.

[†] Equals the area under the load-deflection curve.

Fig. 4



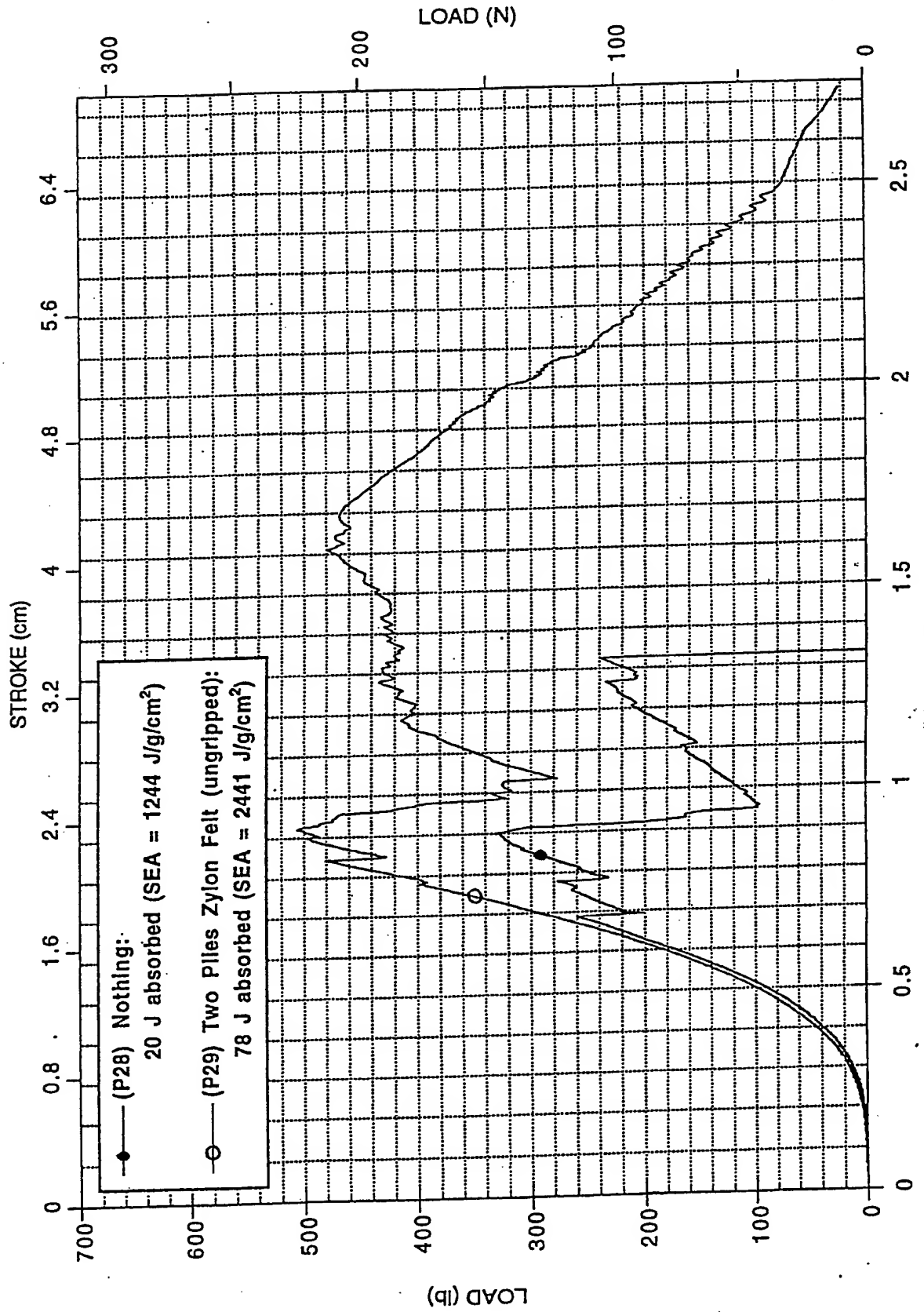


Fig. 6

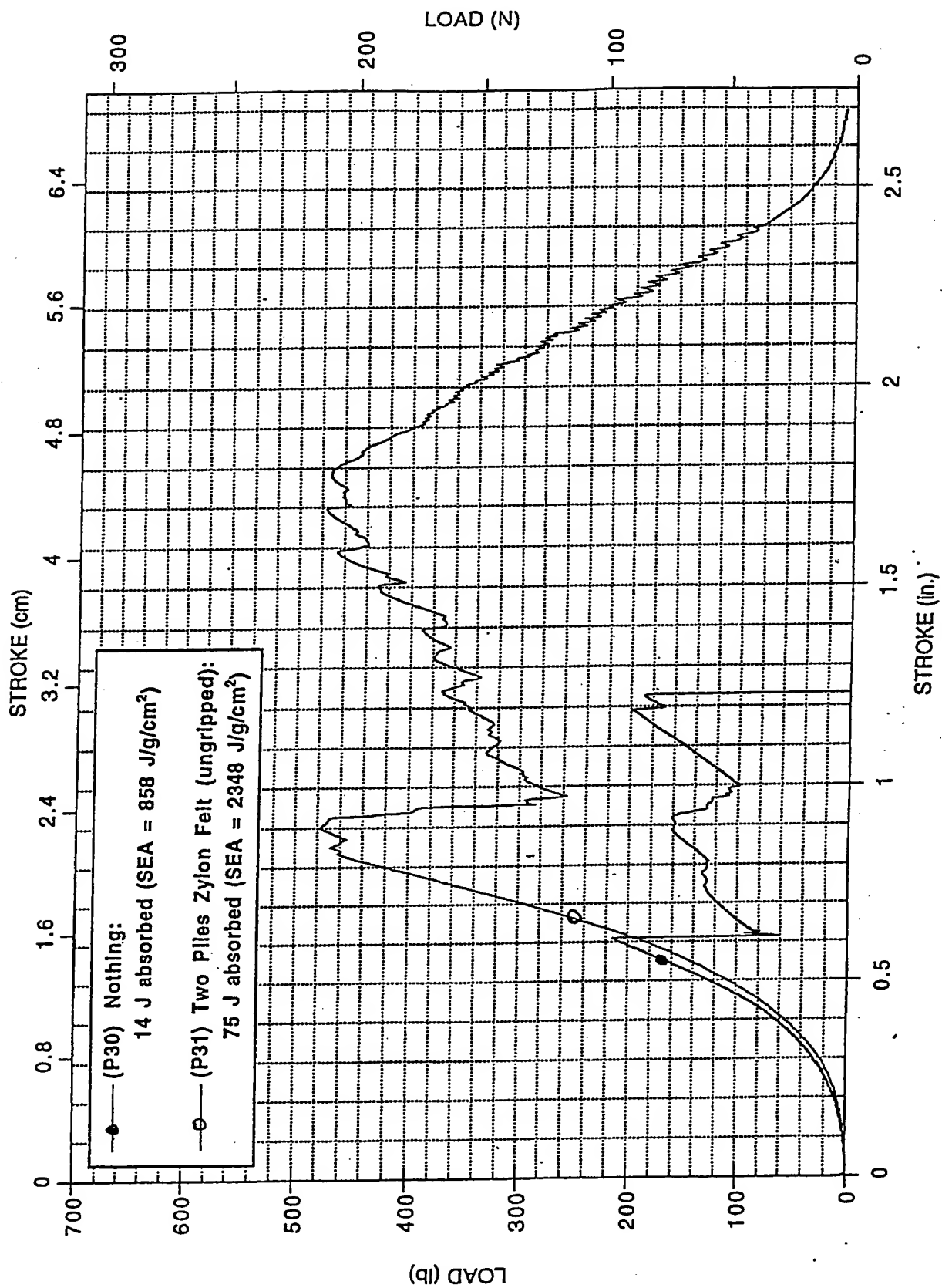


Fig 7

LOAD (lb)

LOAD (N)

STROKE (in.)

STROKE (cm)

Legend:

- (P35) Nothing: 12 J absorbed (SEA = 758 J/g/cm²)
- (P36) Two Piles Zylon Felt (ungripped): 107 J absorbed (SEA = 3350 J/g/cm²)

2

000049 224450

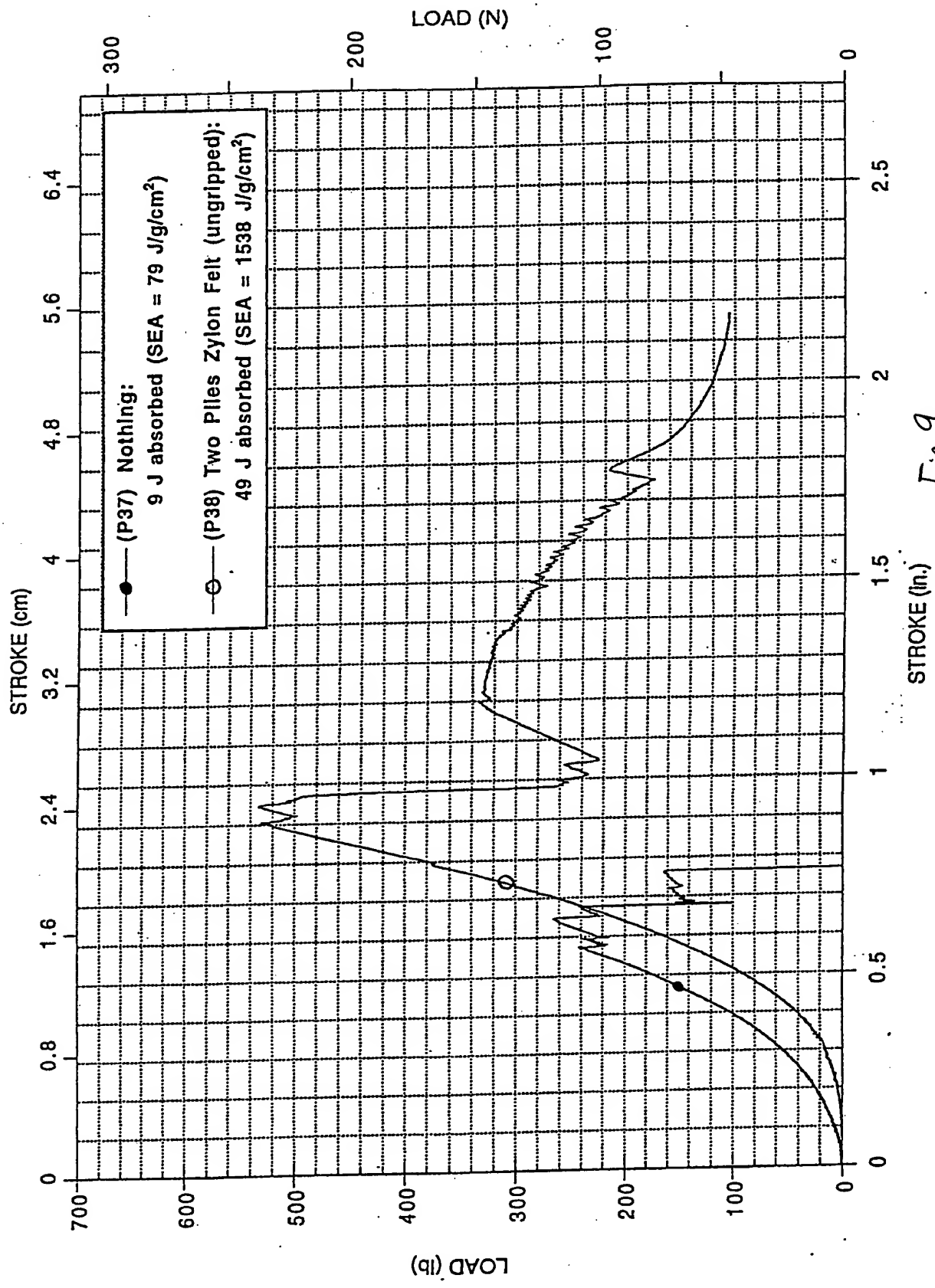


Fig. 9

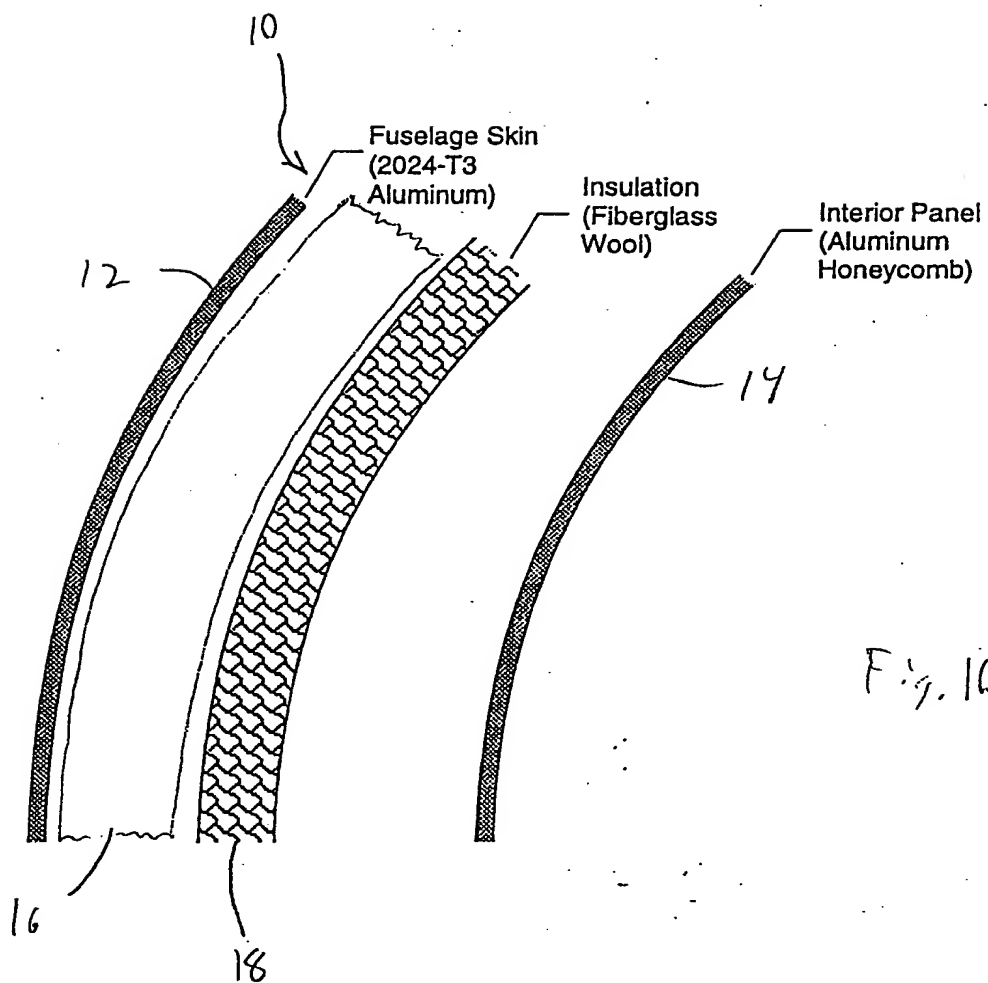


Fig. 10

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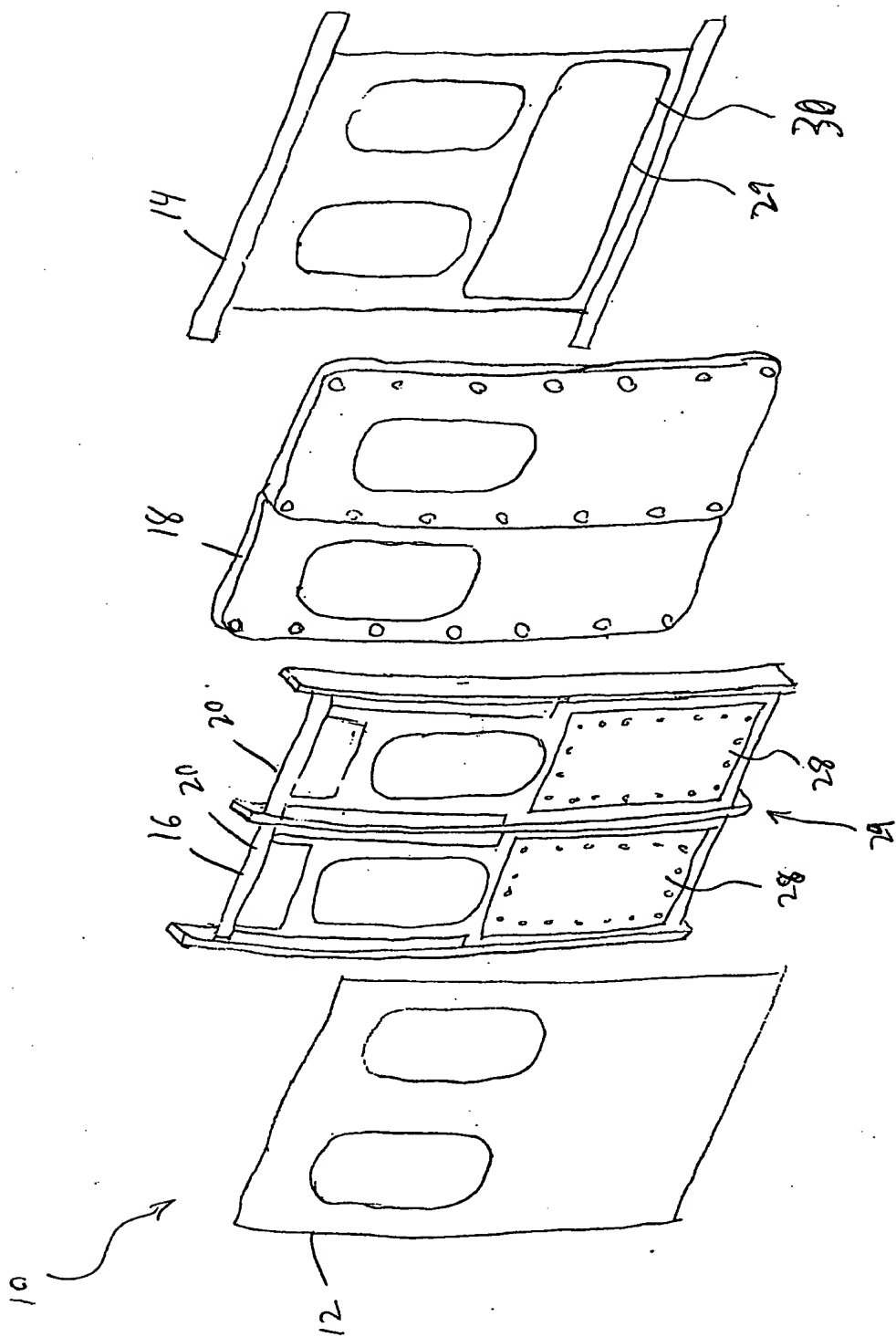


Fig. 12

000040 2564660

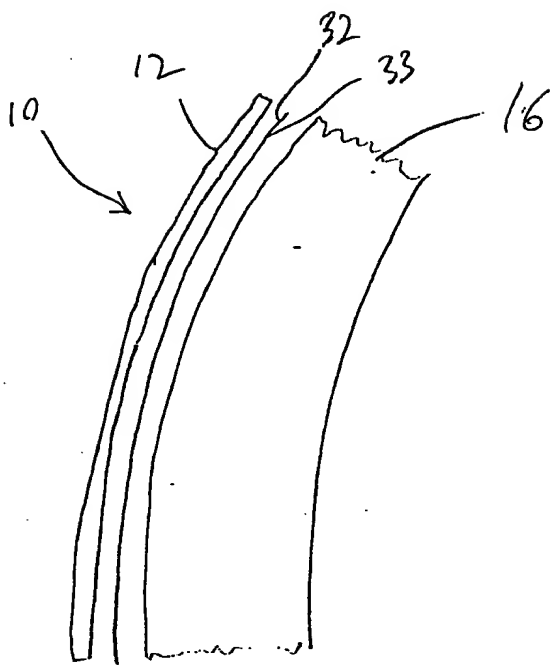


Fig. 13

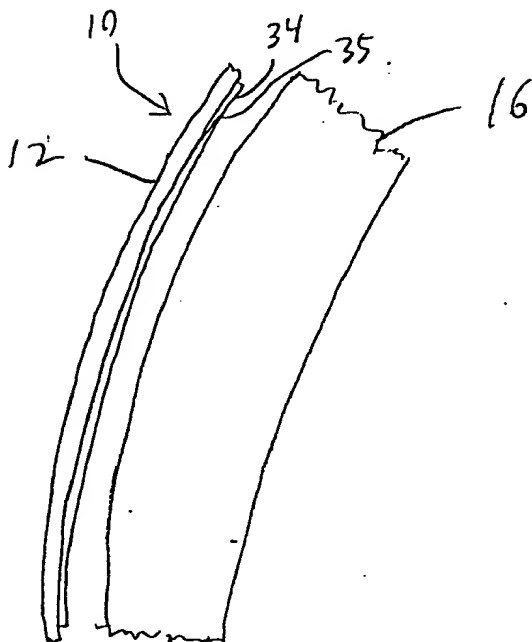


Fig. 14

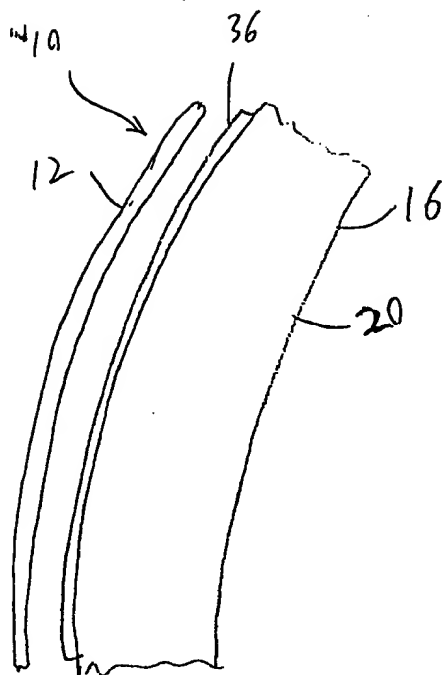


Fig. 15

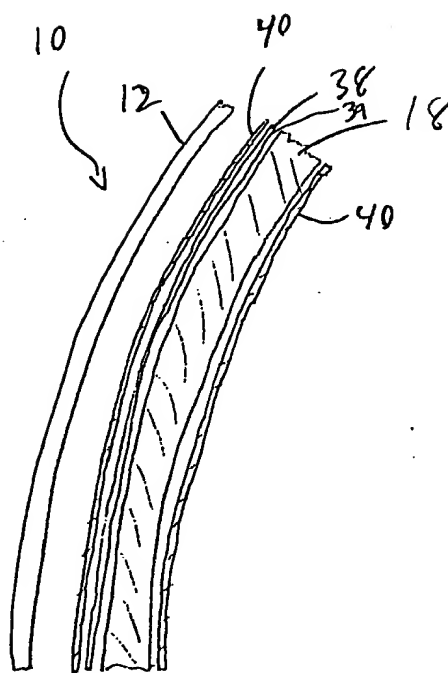


Fig. 16

000007224650

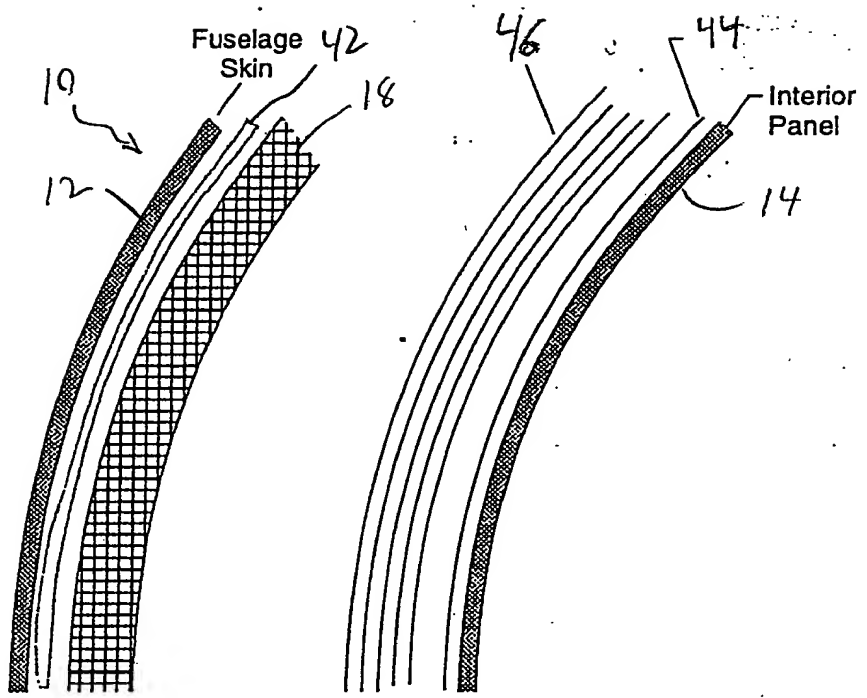


Fig. 17

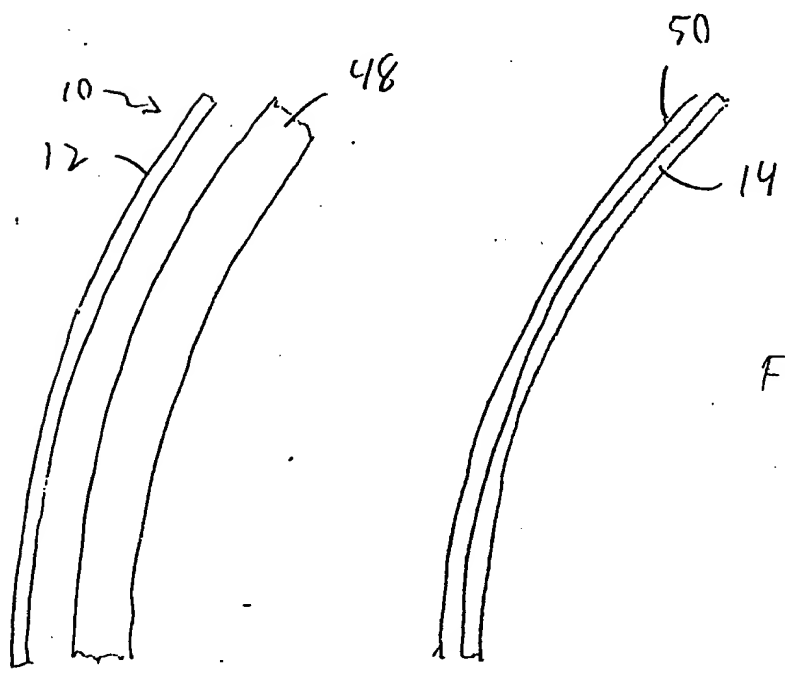


Fig. 18



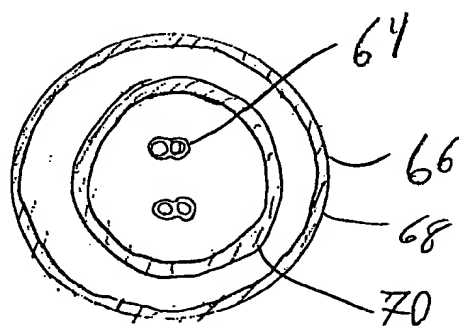
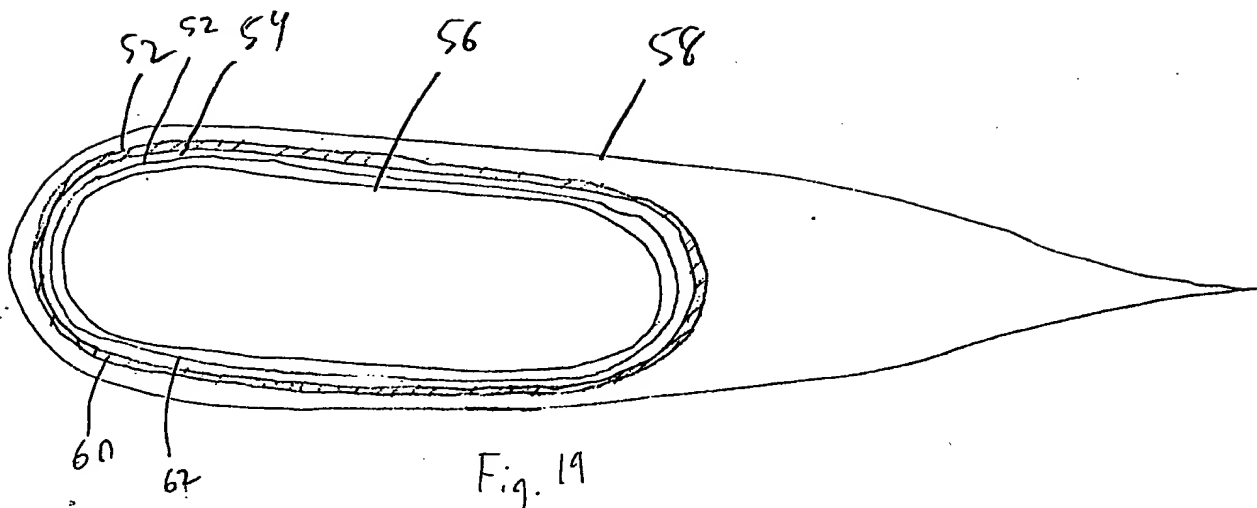


Fig. 20

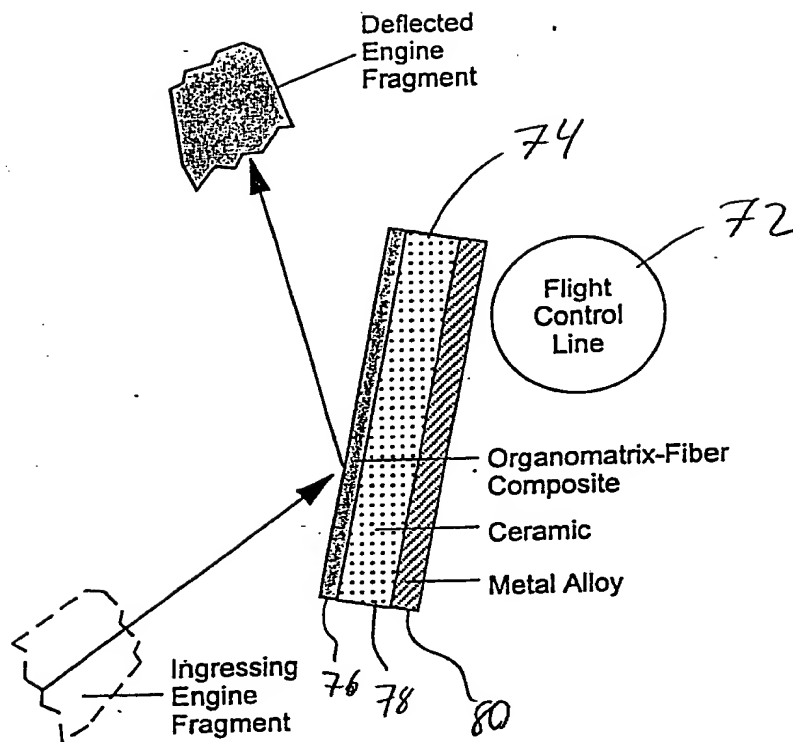


Fig. 21

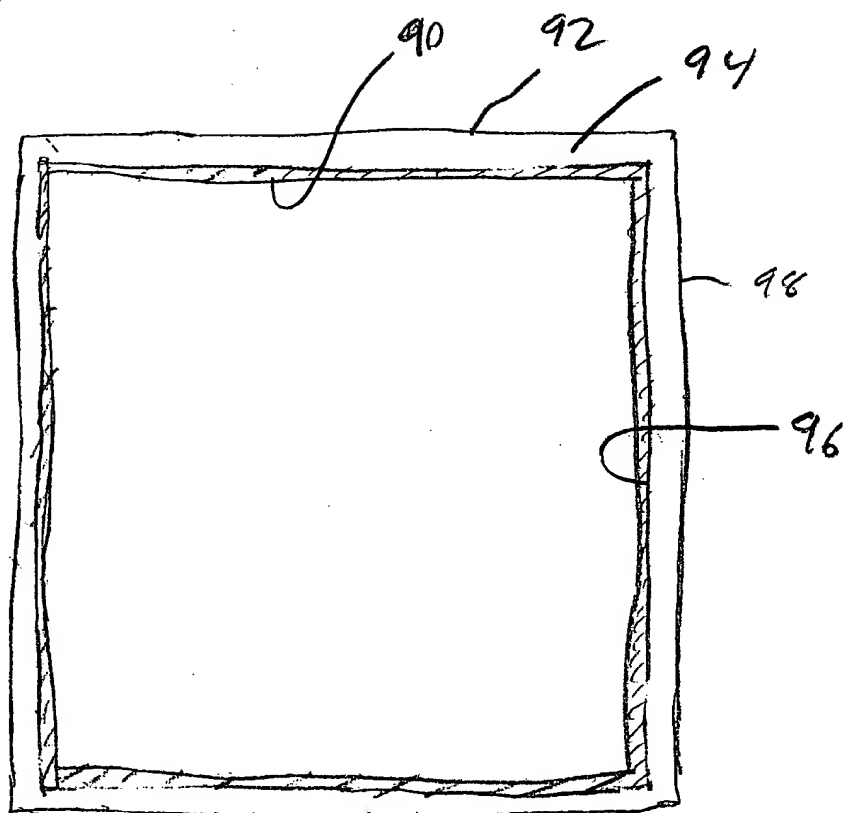
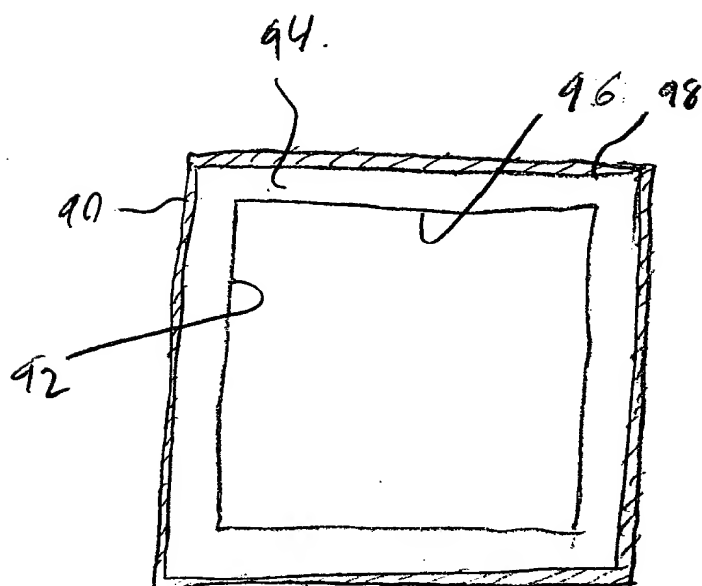
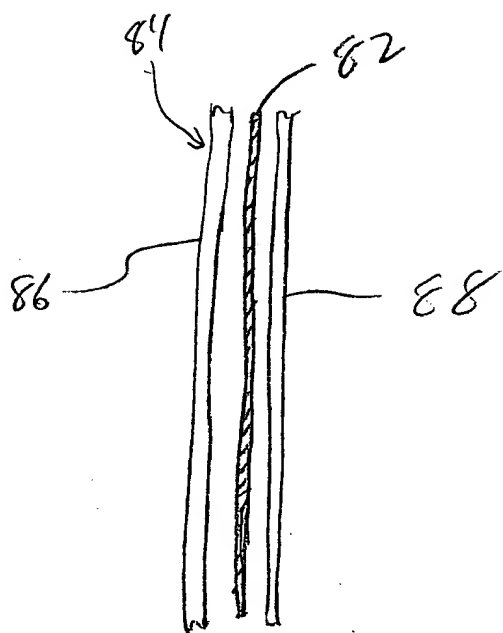


Fig 25